

Notice of Allowability

Application No.

10/507,453

Examiner

Jennifer Doan

Applicant(s)

REIME ET AL.

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on March 26, 2007.
2. ☒ The allowed claim(s) is/are 26,28-36,38-43 and 45-50.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

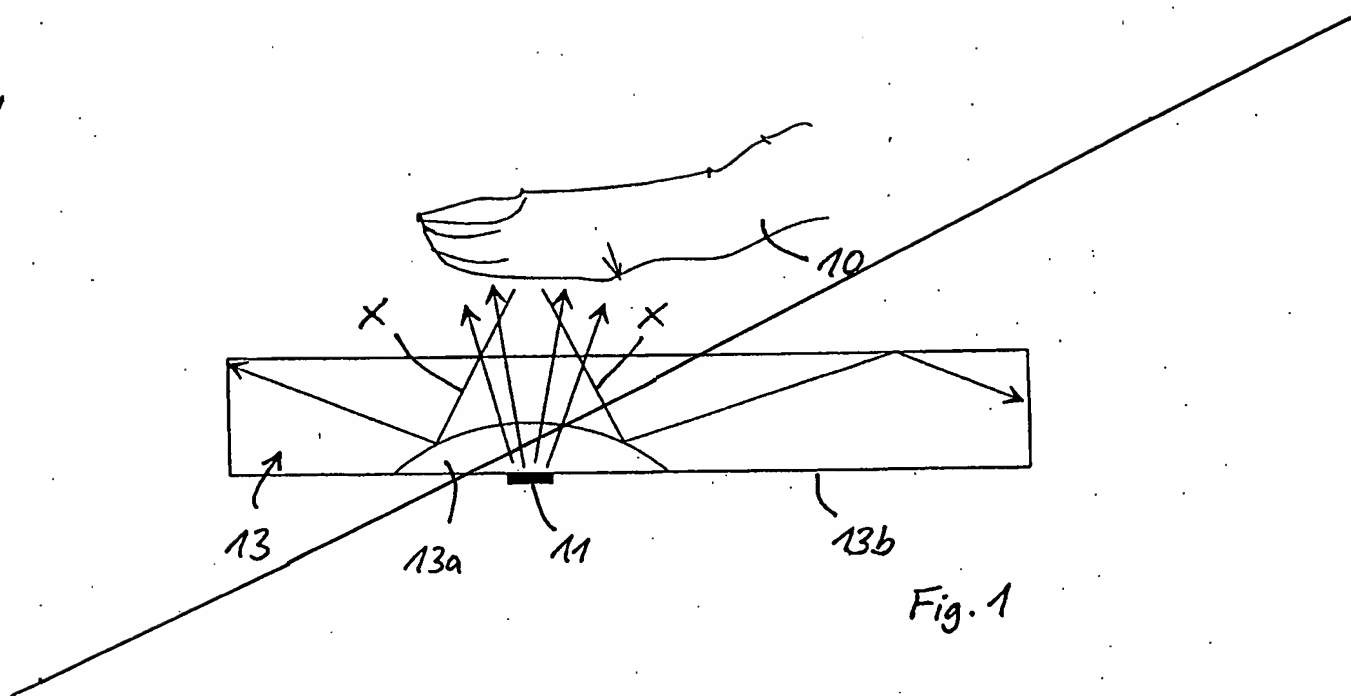
Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date Q32607
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

JENNIFER DOAN
PRIMARY EXAMINER

Jennifer Doan

I.D.
04/12/07



DETAILED ACTION

Response to Amendment

1. Applicant's amendment, filed on March 26, 2007, has been fully considered and entered.

Information Disclosure Statement

2. The prior art documents submitted by applicant in the Information Disclosure Statement filed on March 26, 2007, have all been considered and made of record (note the attached copy of form PTO-1449).

Reasons for Allowance

3. Claims 26, 28-36, 38-43 and 45-50 are allowed.
4. The following is an examiner's statement of reasons for allowance:

The prior art of record fails to disclose or reasonably suggest all the limitations recited in claim 26. Specifically, the prior art of record fails to disclose a device for optoelectronically detecting movement and/or position of an object comprising at least one transmitting element for emitting radiation in the optical wavelength range and at least one receiving element for receiving at least a part of the radiation emitted by the transmitting element and reflected back by the object and also comprising an optical guide arranged in the beam path between the transmitting element and the receiving

Art Unit: 2874

element, wherein the optical guide comprises at least one light coupling element and wherein the at least one transmitting element and/or the at least one receiving element are arranged at the edge of the optical guide spaced from the light coupling element in combination with the other limitations of claim 26.

Claims 28-36 and 38-41 depend from claim 26.

The prior art of record also fails to disclose or reasonably suggest all the limitations recited in claim 42. Specifically, the prior art of record fails to disclose a method for optoelectronically detecting movement and/or position of an object comprising the steps of emitting the radiation through an optical guide up to the object, evaluating the input signal for determining the movement and/or the position of the object, wherein at least one of a diffusely backscattered radiation is coupled into the optical guide by at least one light coupling element of the optical guide itself transversely relative to a longitudinal extent of the optical guide, and a radiation emitted through the optical guide by at least one transmitting element is radiated by at least one light coupling element of the optical guide itself transversely to the longitudinal extent of the optical guide in combination with the other limitations of claim 42.

Claims 43 and 45-50 depend from claim 42.

The prior art document submitted by applicant in the Information Disclosure Statement are the most relevant prior art known. However, the invention of claims 26,

Art Unit: 2874

28-36, 38-43 and 45-50 distinguishes over the prior art of record for the following reasons:

Horst Joachim Dipl Ing (DE 3306941) only disclose the total reflection of an electromagnetic wave is disturbed by contacting with an object at the boundary area of a dielectric waveguide. A switching function is triggered by the concomitant drop in intensity of the electromagnetic wave.

Huttner (FR 2693859) teaches a device for detecting an object including the stripped ends of a fiber optic cable housed in an outer wall. The two cables diverge at their far ends towards a laser diode light source connected to one cable end and light detector connected to the other cable end. Both devices are mounted on a mounting plate. Laser light from the source passes through the first cable, radiating from the open end. If a reflecting surface, for instance a finger, is placed near to the cable open end, the light is reflected and received by the second cable and passed to the detector where the light is detected.

Ehrhard et al. (DE 19851505) disclose an optical device having the phototransmitter LED is located next to a coupling point of an optical fiber; a photoreceiver is located next to the output coupled point of the optical fiber and light radiated from the LED through an actuating face.

However, none of the above references disclose or suggest a method and an apparatus a device for optoelectronically detecting movement and/or position of an object including an optical guide arranged in the beam path between the transmitting element and the receiving element, wherein the optical guide comprises at least one

Art Unit: 2874

light coupling element and wherein the transmitting element and the receiving element are arranged at the edge of the optical guide spaced from the light coupling element.

Claims 26, 28-36, 38-43 and 45-50 are therefore allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Doan whose telephone number is (571) 272-2346. The examiner can normally be reached on Monday to Thursday from 6:00am to 3:30pm, second Friday off.

6. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2874

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



JENNIFER DOAN
PRIMARY EXAMINER